IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Schinner, Charles E.

Confirmation No.: 3561

Group Art Unit: 2625

Serial No.: 10/053,456

Examiner: Milia, Mark R.

Filed: October 26, 2001

Docket No.: 10014488-1

For: **Apparatus and Method for Adapting Image Sensor Aspect Ratio to Print Aspect Ratio in a Digital Image Capture Appliance**

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief - Patents:
Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This Appeal Brief under 37 C.F.R. § 41.37 is submitted in support of the Notice of Appeal filed on August 15, 2007, responding to the final Office Action mailed June 15, 2007 (Part of Paper No./Mail Date 20070608), rejecting claims 1, 3-7, 9-13, 15, 16, 18-22, 24, 26, and 27 in the present application and making the rejection FINAL.

I. REAL PARTY IN INTEREST

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF THE CLAIMS

Claims 1, 3-7, 9-13, 15, 16, 18-22, 24, 26, and 27 are pending in the present application. Through prosecution of this matter, claims 2, 8, 14, 17, 23, and 25 have been canceled. Claims 1, 3-7, 9-13, 15, 16, 18-22, 24, 26, and 27 were rejected by the FINAL Office Action dated June 15, 2007 and are the subject of this appeal.

IV. STATUS OF AMENDMENTS

No amendments have been made or requested since the mailing of the FINAL Office Action and all amendments submitted prior to the FINAL action have been entered. A copy of the currently pending claims is attached hereto as Appendix, section IX.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Embodiments of the claimed subject matter are illustrated in FIGs. 1-7B and are discussed in the specification at least at pages 4-19.

Embodiments of the claimed subject matter, such as those defined by claim 1, define a an apparatus (see, e.g., Figure 1, reference numeral 100, page 6, line 15 – page 11, line 21) for capturing digital images, comprising: an image sensor (see, e.g., Figure 1, reference numeral 104, page 7, lines 5 – 17) including a plurality of image capture elements (see, e.g., Figure 1, reference numeral 105, page 7, lines 9-14), each of the image capture elements configured to capture image data; an input element (see, e.g., Figure 1, reference numeral 164, page 8, lines 25 – page 9, line 3) for communicating a print size to the apparatus; responsive to entry of the print size, means for enabling fewer than all of the plurality of

image capture elements to capture the image data (see, e.g., Figure 1, reference numerals 164, 150, 135, 105, 104, and 102, page 6, lines 15-23; page 7, lines 5-17; page 8, lines 25 – page 9, line 3; page 10, line 4 – page 11, line 17); and means for matching image capture elements corresponding to the fewer than all of the plurality of image capture elements with an aspect ratio corresponding to the print size (see, e.g., Figure 1, reference numerals 150, 138, 105, 104, and 102, page 6, lines 15-23; page 8, lines 25 – page 9, line 3; page 10, line 4 – page 11, line 17).

Embodiments of the claimed subject matter, such as those defined by claim 7, define a method for adapting a print size to a captured image in a digital image capture device (see, e.g., Figure 1, reference numeral 100, page 6, line 15 – page 11, line 21), the method comprising the steps of: providing an image sensor (see, e.g., Figure 1, reference numeral 104, page 7, lines 5 – 17) including a plurality of image capture elements (see, e.g., Figure 1, reference numeral 105, page 7, lines 9-14); enabling fewer than all of the plurality of image capture elements to capture image sensor data (see, e.g., Figure 4, reference numerals 406, 408, page 14, lines 11-23); matching the fewer than all of the plurality of image capture elements of the image sensor with an aspect ratio corresponding to a selected print size (see, e.g., Figure 4, reference numeral 408, page 14, lines 18-23); and presenting the captured image sensor data corresponding to the selected print size to a user of the image capture device (see, e.g., Figure 4, reference numeral 410, page 15, lines 6-13).

Embodiments of the claimed subject matter, such as those defined by claim 16, define a computer readable medium (see, e.g., Figure 1, reference numerals 102 or 136, page 5, line 18 – page 11, line 17) having a program (see, e.g., Figure 1, reference numeral 150, page 10, line 14 – page 11, line 17) for adapting a print size to a captured image in a digital image capture device (see, e.g., Figure 1, reference numeral 100, page 6, line 15 – page 11, line 21), the program including logic for performing the steps of: enabling fewer than all of a plurality of image capture elements of an image sensor (see, e.g., Figure 1,

reference numeral 104, page 7, lines 5 – 17) to capture image data (see, e.g., Figure 4, reference numerals 406, 408, page 14, lines 11-23); matching the fewer than all of ~~a~~ the plurality of image capture elements of ~~an~~ the image sensor with an aspect ratio corresponding to a selected print size (see, e.g., Figure 4, reference numeral 408, page 14, lines 18-23); and presenting the captured image sensor data corresponding to the selected print size to a user of the image capture device (see, e.g., Figure 4, reference numeral 410, page 15, lines 6-13).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The FINAL Office Action rejected claims 1, 3-7, 9-13, 15, 16, 18-22, 24, 26, and 27 under 35 U.S.C. § 103(a) as allegedly unpatentable over *Petruchik et al*. ("*Petruchik*," U.S. Pat. No. 5,619,738) in view of *Ikeda, et al. ("Ikeda,"* U.S. Pat. No. 6,297,874*)*.

VII. ARGUMENT

The FINAL Office Action has rejected claims 1, 3-7, 9-13, 15, 16, 18-22, 24, 26, and 27 as allegedly unpatentable over *Petruchik* in view of *Ikeda*.

The U.S. Patent and Trademark Office ("USPTO") has the burden under section 103 to establish a *prima facie* case of obviousness according to the factual inquiries expressed in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). The four factual inquires, also expressed in MPEP 2100-116, are as follows:

(A) Determining the scope and contents of the prior art;

(B) Ascertaining the differences between the prior art and the claims in issue;

(C) Resolving the level of ordinary skill in the pertinent art; and

(D) Evaluating evidence of secondary considerations.

Appellants respectfully submit that a *prima facie* case of obviousness is not established using the art of record. For at least the reasons set forth herein, Appellants respectfully

disagree with the rejections and request that the rejections be overturned.

I. Discussion of Rejections of Claims 1, 3-7, 9-13, 15, 16, 18-22, 24, 26, and 27 Under 35 U.S.C. § 103(a) pertaining to *Petruchik* in view of *Ikeda*

Independent Claim 1

Claim 1 recites (with emphasis added):

> 1. An apparatus for capturing digital images, comprising:
> an image sensor including a plurality of image capture elements, each of the image capture elements configured to capture image data;
> an input element for communicating a print size to the apparatus;
> ***responsive to entry of the print size, means for enabling fewer than all of the plurality of image capture elements to capture the image data***; and
> means for matching image capture elements corresponding to the fewer than all of the plurality of image capture elements with an aspect ratio corresponding to the print size.

Appellants respectfully submit that *Petruchik* in view of *Ikeda* fails to disclose, teach, or suggest at least the above-emphasized claim features. The final Office Action makes the following admission with regard to *Petruchik* (page 4, no emphasis added):

> Petruchik does not disclose expressly responsive to entry of the print size, means for enabling fewer than all of the plurality of image capture elements to capture the image data and <u>means for matching image capture elements corresponding to fewer than all of the plurality of image capture elements</u> with an aspect ratio corresponding to the print size.

The final Office Action suggests that *Ikeda* makes up for these deficiencies, and in particular, alleges the following under the response to arguments section (page 2, no emphasis added):

> Particularly, Ikeda discloses a camera that can write information regarding print size, among other information, into the magnetic memory region **27** of the film during shooting (see column 6 lines 55-64). The film is then processed by a film image reading apparatus that is controlled by CPU **1**. The CPU **1** reads in the print size information stored in magnetic memory region **27** and controls light source driving circuit **9**, light source **10**, line sensor driving circuit **6**, and line sensor **12** accordingly. The CPU **1** sets the accumulation time and receiving units based on the print size information received from magnetic memory region

> **27**. Thus, it can be seen that in response to a print size, it is possible for fewer than all the image capture elements (combination of line sensor **12**, line sensor driving circuit **6**, and the photo-electric conversion units) to capture the image data (see column7 line 25-column 8 line 64).

Appellants respectfully disagree. The sections described above for *Ikeda* still reference Figure 1 of *Ikeda*, which is referred to generally as a film scanner that operates as described in columns 1 and 2 of *Ikeda* (see, *e.g.*, the non-final Office Action dated September 22, 2005). As set forth in Appellants' response dated November 30, 2005 to the September 22nd Office Action, *Ikeda* provides the following description of the line sensor and photo-conversion units from Figure 1 of *Ikeda* (sections from *Ikeda* in brackets):

> [col. 1, lines 31-33]The line sensor is typically formed of an image accumulation unit, which is a plurality of photo-electric conversion units arranged in a row.
> [col. 2, lines 43-45] An image sensor is also provided to receive light that has passed through image regions of the roll film original, and output corresponding image signals.

There is nothing in the above cited sections or elsewhere in *Ikeda* that discloses or suggests anything less than all of the photo-electric conversion units (assuming *arguendo* that the photo-electric conversion units are equated to the image capture elements) are used in the image capture process. Appellants reproduce the above-cited sections of *Ikeda*, from the final Office Action, below (*e.g.*, column 6, lines 55-64; column 7, line 25-column 8, line 64, emphasis added):

> Information concerning image capture such as frame number, title, shooting date, shooting conditions and a designated print size also are recorded in the magnetic memory region 27 for each exposed frame. For example, the following print sizes can be designated; a high vision size (H size); a classic size (C size); and a panorama size (P size). The aspect ratio is 16:9 for the H size, 3:2 for the C size and 3:1 for the P size.
>
> The camera can write information on the film during shooting. No information is recorded in the magnetic… [column 6 lines 55-64]
>
> The magnetic head 15 reads magnetic information from the magnetic memory regions 21, 23, 27 under the control of the magnetic signal processing circuit 5 and sends the read information to the CPU 1. The magnetic head 15 also writes information into the magnetic memory regions 21, 23, 27 under the control of the

magnetic signal processing circuit 5.

The magnetic signal processing circuit 5 digitizes the magnetic information read by the magnetic head 15 and sends the digitized information to the CPU 1 under the control of the CPU 1. The magnetic signal processing circuit 5 also sends the magnetic head 15 information to be written in the magnetic memory region 27 under control of the CPU 1.

The light source 10 illuminates one face of the roll film 18 under control of the light source driving circuit 9. The light source 10 is provided with three colors of light emitting diodes (LEDs) such as red (R), green (G) and blue (B). In this case, the light source driving circuit 9 controls turning on and off of the three colors of LEDs of the light source 10 according to instructions from the CPU 1. The light source 10 can be a white-light light source. In this case, R, G and B filters can be provided. A switching mechanism for filtering three colors is necessary if a three color filter is provided.

The lens 11 is adjusted and arranged to direct light rays from the light source 10 that have passed through the roll film 18 onto a light receiving surface of the line sensor 12. The line sensor 12 is provided with an image accumulation unit which is a plurality of photo-electric conversion units arranged in a row. The line sensor 12 is also provided with a transfer unit to transfer electric charge accumulated in **each** of photo-electric conversion unit. The line sensor 12 is arranged in such a manner that the light receiving surfaces of the **plurality of** photo-electric conversion units are arranged in a row to be perpendicular to the direction of the movement of the roll film 18.

The line sensor 12 is either a black and white image sensor or a color image sensor. The light source 10 to be used for the black and white image sensor is a light source which a) alternately provides three colors of light, R, G and B, or b) is a white-light light source. The light source 10 used for a color image sensor is a white-light light source.

The line sensor driving circuit 6 performs the following control operations under direction of the CPU 1. The line sensor driving circuit 6 controls an accumulation operation and an accumulation time of the line sensor 12. The line sensor driving circuit 6 also controls the main scanning operation which discharges the accumulated electric charge to the signal processing circuit 7. The accumulated electric charges are electric signals that represent an image.

The signal processing circuit 7 amplifies the signals received from the line sensor 12, performs signal processing and sends the result to an A/D converter 8 according to instructions from the CPU 1. The signal processing performed by the signal processing circuit 7 includes processing such as correlated double sampling (CDS), shading correction, dark current correction, and even-odd correction. The A/D converter 8 converts image signals sent from the signal processing circuit 7 into digital signals with a predetermined number of bits and sends the converted signals to the CPU 1. The predetermined number of bits can be eight, for example.

The CPU 1 performs the following control operations according to a program which is set in the memory 2. The CPU 1 controls the motor driving circuit 4, the magnetic signal processing circuit 5, the line sensor driving circuit 6 and the light

> source driving circuit 9 to perform reading of the roll film 18. The CPU 1 also sets the accumulation time and the like for the line sensor 12 to accumulate electric charge according to information regarding scanning exposure conditions which is obtained from the host computer 19.
>
> Next, the CPU 1 detects positions of perforations in the roll film and decodes the contents of the bar codes, based on outputs from the medium position detection sensor 13 and the optical information reading sensor 14. The CPU 1 also takes in magnetic information and a film image which have been read and processed by the magnetic signal processing circuit 5, signal process circuit 7 and the A/D converter 8, and stores them in the memory 2. At this time, the CPU 1 stores the line data (i.e., image data) equivalent of one or several frames which are read into the memory 2 as information comprising three colors: R, G and B. Alternatively, the CPU 1 stores the line data equivalent of one or several frames which are read in the memory 2 as information corresponding to one of three colors: R, G and B.
>
> The CPU 1 obtains data concerning the display monitor from the host computer 19 through the IF circuit 3. The data can include, for example, screen size and display color numbers. The screen size is obtained in order to define a reading resolution given a relationship between the number of frames and the screen size. The CPU 1 also obtains scanning exposure conditions setting data, which are set by the user from the host computer 19 through IF circuit 3 and displayed on the display monitor. The memory 2 consists of a program memory and a working memory. Selection window data, index display setting window data and the like are also stored in the memory 2.
>
> The IF circuit 3 of the configuration of the first embodiment is a small computer system interface (SCSI). The IF circuit 3 outputs line data (i.e., image data) stored in the memory 2 to the host computer 19. The IF circuit 2 also sends frame designations and other commands as well as display monitor information from the host computer 19 to the CPU 1. [column7 line 25-column 8 line 64]

Appellants respectfully submit that nothing in these cited portions or elsewhere in *Ikeda* disclose or suggest at least the above emphasized claim features. Indeed, the above-emphasized portions would suggest otherwise (i.e., all photo-conversion units are used). Accordingly, Appellants respectfully request that the rejection be overturned.

Appellants wish to note as an aside that the claim language refers to "***an image sensor including a plurality of image capture elements***," and hence, contrary to what is alleged in the final Office Action (page 2), support in *Ikeda* cannot be found for the allegation in the final Office Action that the line sensor driving circuit shown in Figure 1 of *Ikeda* is an image capture element that is included within the sensor.

Because independent claim 1 is allowable over the art of record, dependent claims 3

through 6 are allowable as a matter of law for at least the reason that the dependent claims 3 through 6 contain all elements of their respective base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Hence, Appellants respectfully request that the rejection to claims 1 and 3-6 be overturned.

Independent Claim 7

Claim 7 recites (with emphasis added):

> 7. A method for adapting a print size to a captured image in a digital image capture device, the method comprising the steps of:
> providing an image sensor including a plurality of image capture elements;
> ***enabling fewer than all of the plurality of image capture elements to capture image sensor data***;
> matching the fewer than all of the plurality of image capture elements of the image sensor with an aspect ratio corresponding to a selected print size; and
> presenting the captured image sensor data corresponding to the selected print size to a user of the image capture device.

Appellants respectfully submit that *Petruchik* in view of *Ikeda* fails to disclose, teach, or suggest at least the above-emphasized claim features. The final Office Action makes the following admission with regard to *Petruchik* (page 5, no emphasis added):

> Petruchik does not disclose expressly enabling fewer than all of the plurality of image capture elements to capture the image data and matching fewer than all of the plurality of image capture elements of the image sensor with an aspect ratio corresponding to a selected print size.

The final Office Action suggests that *Ikeda* makes up for these deficiencies, and in particular, alleges the following under the response to arguments section (page 2, no emphasis added):

> Particularly, Ikeda discloses a camera that can write information regarding print size, among other information, into the magnetic memory region **27** of the film during shooting (see column 6 lines 55-64). The film is then processed by a film image reading apparatus that is controlled by CPU **1**. The CPU **1** reads in the print size information stored in magnetic memory region **27** and controls light source driving circuit **9**, light source **10**, line sensor driving circuit **6**, and line sensor **12** accordingly. The CPU **1** sets the accumulation time and receiving

> units based on the print size information received from magnetic memory region **27**. Thus, it can be seen that in response to a print size, it is possible for fewer than all the image capture elements (combination of line sensor **12**, line sensor driving circuit **6**, and the photo-electric conversion units) to capture the image data (see column7 line 25-column 8 line 64).

Appellants respectfully disagree. The sections described above for *Ikeda* still reference Figure 1 of *Ikeda*, which is referred to generally as a film scanner that operates as described in columns 1 and 2 of *Ikeda* (see, *e.g.*, the non-final Office Action dated September 22, 2005). As set forth in Appellants' response dated November 30, 2005 to the September 22nd Office Action, *Ikeda* provides the following description of the line sensor and photo-conversion units from Figure 1 of *Ikeda* (sections from *Ikeda* in brackets):

> [col. 1, lines 31-33]The line sensor is typically formed of an image accumulation unit, which is a plurality of photo-electric conversion units arranged in a row.
> [col. 2, lines 43-45] An image sensor is also provided to receive light that has passed through image regions of the roll film original, and output corresponding image signals.

There is nothing in the above cited sections or elsewhere in *Ikeda* that discloses or suggests anything less than all of the photo-electric conversion units (assuming *arguendo* that the photo-electric conversion units are equated to the image capture elements) are used in the image capture process. Appellants reproduce the above-cited sections of *Ikeda*, from the final Office Action, below (*e.g.*, column 6, lines 55-64; column 7, line 25-column 8, line 64, emphasis added):

> Information concerning image capture such as frame number, title, shooting date, shooting conditions and a designated print size also are recorded in the magnetic memory region 27 for each exposed frame. For example, the following print sizes can be designated; a high vision size (H size); a classic size (C size); and a panorama size (P size). The aspect ratio is 16:9 for the H size, 3:2 for the C size and 3:1 for the P size.
>
> The camera can write information on the film during shooting. No information is recorded in the magnetic… [column 6 lines 55-64]
>
> The magnetic head 15 reads magnetic information from the magnetic memory regions 21, 23, 27 under the control of the magnetic signal processing circuit 5 and sends the read information to the CPU 1. The magnetic head 15 also writes

information into the magnetic memory regions 21, 23, 27 under the control of the magnetic signal processing circuit 5.

The magnetic signal processing circuit 5 digitizes the magnetic information read by the magnetic head 15 and sends the digitized information to the CPU 1 under the control of the CPU 1. The magnetic signal processing circuit 5 also sends the magnetic head 15 information to be written in the magnetic memory region 27 under control of the CPU 1.

The light source 10 illuminates one face of the roll film 18 under control of the light source driving circuit 9. The light source 10 is provided with three colors of light emitting diodes (LEDs) such as red (R), green (G) and blue (B). In this case, the light source driving circuit 9 controls turning on and off of the three colors of LEDs of the light source 10 according to instructions from the CPU 1. The light source 10 can be a white-light light source. In this case, R, G and B filters can be provided. A switching mechanism for filtering three colors is necessary if a three color filter is provided.

The lens 11 is adjusted and arranged to direct light rays from the light source 10 that have passed through the roll film 18 onto a light receiving surface of the line sensor 12. The line sensor 12 is provided with an image accumulation unit which is a plurality of photo-electric conversion units arranged in a row. The line sensor 12 is also provided with a transfer unit to transfer electric charge accumulated in **each** of photo-electric conversion unit. The line sensor 12 is arranged in such a manner that the light receiving surfaces of the **plurality of** photo-electric conversion units are arranged in a row to be perpendicular to the direction of the movement of the roll film 18.

The line sensor 12 is either a black and white image sensor or a color image sensor. The light source 10 to be used for the black and white image sensor is a light source which a) alternately provides three colors of light, R, G and B, or b) is a white-light light source. The light source 10 used for a color image sensor is a white-light light source.

The line sensor driving circuit 6 performs the following control operations under direction of the CPU 1. The line sensor driving circuit 6 controls an accumulation operation and an accumulation time of the line sensor 12. The line sensor driving circuit 6 also controls the main scanning operation which discharges the accumulated electric charge to the signal processing circuit 7. The accumulated electric charges are electric signals that represent an image.

The signal processing circuit 7 amplifies the signals received from the line sensor 12, performs signal processing and sends the result to an A/D converter 8 according to instructions from the CPU 1. The signal processing performed by the signal processing circuit 7 includes processing such as correlated double sampling (CDS), shading correction, dark current correction, and even-odd correction. The A/D converter 8 converts image signals sent from the signal processing circuit 7 into digital signals with a predetermined number of bits and sends the converted signals to the CPU 1. The predetermined number of bits can be eight, for example.

The CPU 1 performs the following control operations according to a program which is set in the memory 2. The CPU 1 controls the motor driving circuit 4, the

> magnetic signal processing circuit 5, the line sensor driving circuit 6 and the light source driving circuit 9 to perform reading of the roll film 18. The CPU 1 also sets the accumulation time and the like for the line sensor 12 to accumulate electric charge according to information regarding scanning exposure conditions which is obtained from the host computer 19.
>
> Next, the CPU 1 detects positions of perforations in the roll film and decodes the contents of the bar codes, based on outputs from the medium position detection sensor 13 and the optical information reading sensor 14. The CPU 1 also takes in magnetic information and a film image which have been read and processed by the magnetic signal processing circuit 5, signal process circuit 7 and the A/D converter 8, and stores them in the memory 2. At this time, the CPU 1 stores the line data (i.e., image data) equivalent of one or several frames which are read into the memory 2 as information comprising three colors: R, G and B. Alternatively, the CPU 1 stores the line data equivalent of one or several frames which are read in the memory 2 as information corresponding to one of three colors: R, G and B.
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> The CPU 1 obtains data concerning the display monitor from the host computer 19 through the IF circuit 3. The data can include, for example, screen size and display color numbers. The screen size is obtained in order to define a reading resolution given a relationship between the number of frames and the screen size. The CPU 1 also obtains scanning exposure conditions setting data, which are set by the user from the host computer 19 through IF circuit 3 and displayed on the display monitor. The memory 2 consists of a program memory and a working memory. Selection window data, index display setting window data and the like are also stored in the memory 2.
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> The IF circuit 3 of the configuration of the first embodiment is a small computer system interface (SCSI). The IF circuit 3 outputs line data (i.e., image data) stored in the memory 2 to the host computer 19. The IF circuit 2 also sends frame designations and other commands as well as display monitor information from the host computer 19 to the CPU 1. [column7 line 25-column 8 line 64]

Appellants respectfully submit that nothing in these cited portions or elsewhere in *Ikeda* disclose or suggest at least the above emphasized claim features. Indeed, the above-emphasized portions would suggest otherwise (i.e., all photo-conversion units are used). Accordingly, Appellants respectfully request that the rejection be overturned.

Appellants wish to note as an aside that the claim language refers to "***an image sensor including a plurality of image capture elements***," and hence, contrary to what is alleged in the final Office Action (page 2), support in *Ikeda* cannot be found for the allegation in the final Office Action that the line sensor driving circuit shown in Figure 1 of *Ikeda* is an image capture element that is included within the sensor.

Because independent claim 7 is allowable over the art of record, dependent claims 9-13, 15, and 26 are allowable as a matter of law. Hence, Appellants respectfully request that the rejection to claims 7 and 9-13, 15, and 26 be overturned.

Independent Claim 16

Claim 16 recites (with emphasis added):

> 16. A computer readable medium having a program for adapting a print size to a captured image in a digital image capture device, the program including logic for performing the steps of:
> ***enabling fewer than all of a plurality of image capture elements of an image sensor to capture image data***;
> matching the fewer than all of the plurality of image capture elements of the image sensor with an aspect ratio corresponding to a selected print size; and
> presenting the captured image sensor data corresponding to the selected print size to a user of the image capture device.

Appellants respectfully submit that *Petruchik* in view of *Ikeda* fails to disclose, teach, or suggest at least the above-emphasized claim features. The final Office Action makes the following admission with regard to *Petruchik* (page 6, no emphasis added):

> Petruchik does not disclose expressly enabling fewer than all of the plurality of image capture elements to capture the image data and matching fewer than all of the plurality of image capture elements of the image sensor with an aspect ratio corresponding to a selected print size.

The final Office Action suggests that *Ikeda* makes up for these deficiencies, and in particular, alleges the following under the response to arguments section (page 2, no emphasis added):

> Particularly, Ikeda discloses a camera that can write information regarding print size, among other information, into the magnetic memory region **27** of the film during shooting (see column 6 lines 55-64). The film is then processed by a film image reading apparatus that is controlled by CPU **1**. The CPU **1** reads in the print size information stored in magnetic memory region **27** and controls light source driving circuit **9**, light source **10**, line sensor driving circuit **6**, and line sensor **12** accordingly. The CPU **1** sets the accumulation time and receiving units based on the print size information received from magnetic memory region **27**. Thus, it can be seen that in response to a print size, it is possible for fewer than all the image capture elements (combination of line sensor **12**, line sensor driving circuit **6**, and the photo-electric conversion units) to capture the image

data (see column7 line 25-column 8 line 64).

Appellants respectfully disagree. The sections described above for *Ikeda* still reference Figure 1 of *Ikeda*, which is referred to generally as a film scanner that operates as described in columns 1 and 2 of *Ikeda* (see, *e.g.*, the non-final Office Action dated September 22, 2005). As set forth in Appellants' response dated November 30, 2005 to the September 22nd Office Action, *Ikeda* provides the following description of the line sensor and photo-conversion units from Figure 1 of *Ikeda* (sections from *Ikeda* in brackets):

> [col. 1, lines 31-33]The line sensor is typically formed of an image accumulation unit, which is a plurality of photo-electric conversion units arranged in a row.
> [col. 2, lines 43-45] An image sensor is also provided to receive light that has passed through image regions of the roll film original, and output corresponding image signals.

There is nothing in the above cited sections or elsewhere in *Ikeda* that discloses or suggests anything less than all of the photo-electric conversion units (assuming *arguendo* that the photo-electric conversion units are equated to the image capture elements) are used in the image capture process. Appellants reproduce the above-cited sections of *Ikeda*, from the final Office Action, below (*e.g.*, column 6, lines 55-64; column 7, line 25-column 8, line 64, emphasis added):

> Information concerning image capture such as frame number, title, shooting date, shooting conditions and a designated print size also are recorded in the magnetic memory region 27 for each exposed frame. For example, the following print sizes can be designated; a high vision size (H size); a classic size (C size); and a panorama size (P size). The aspect ratio is 16:9 for the H size, 3:2 for the C size and 3:1 for the P size.
>
> The camera can write information on the film during shooting. No information is recorded in the magnetic… [column 6 lines 55-64]
>
> The magnetic head 15 reads magnetic information from the magnetic memory regions 21, 23, 27 under the control of the magnetic signal processing circuit 5 and sends the read information to the CPU 1. The magnetic head 15 also writes information into the magnetic memory regions 21, 23, 27 under the control of the magnetic signal processing circuit 5.
>
> The magnetic signal processing circuit 5 digitizes the magnetic information read

by the magnetic head 15 and sends the digitized information to the CPU 1 under the control of the CPU 1. The magnetic signal processing circuit 5 also sends the magnetic head 15 information to be written in the magnetic memory region 27 under control of the CPU 1.

The light source 10 illuminates one face of the roll film 18 under control of the light source driving circuit 9. The light source 10 is provided with three colors of light emitting diodes (LEDs) such as red (R), green (G) and blue (B). In this case, the light source driving circuit 9 controls turning on and off of the three colors of LEDs of the light source 10 according to instructions from the CPU 1. The light source 10 can be a white-light light source. In this case, R, G and B filters can be provided. A switching mechanism for filtering three colors is necessary if a three color filter is provided.

The lens 11 is adjusted and arranged to direct light rays from the light source 10 that have passed through the roll film 18 onto a light receiving surface of the line sensor 12. The line sensor 12 is provided with an image accumulation unit which is a plurality of photo-electric conversion units arranged in a row. The line sensor 12 is also provided with a transfer unit to transfer electric charge accumulated in **each** of photo-electric conversion unit. The line sensor 12 is arranged in such a manner that the light receiving surfaces of the **plurality of** photo-electric conversion units are arranged in a row to be perpendicular to the direction of the movement of the roll film 18.

The line sensor 12 is either a black and white image sensor or a color image sensor. The light source 10 to be used for the black and white image sensor is a light source which a) alternately provides three colors of light, R, G and B, or b) is a white-light light source. The light source 10 used for a color image sensor is a white-light light source.

The line sensor driving circuit 6 performs the following control operations under direction of the CPU 1. The line sensor driving circuit 6 controls an accumulation operation and an accumulation time of the line sensor 12. The line sensor driving circuit 6 also controls the main scanning operation which discharges the accumulated electric charge to the signal processing circuit 7. The accumulated electric charges are electric signals that represent an image.

The signal processing circuit 7 amplifies the signals received from the line sensor 12, performs signal processing and sends the result to an A/D converter 8 according to instructions from the CPU 1. The signal processing performed by the signal processing circuit 7 includes processing such as correlated double sampling (CDS), shading correction, dark current correction, and even-odd correction. The A/D converter 8 converts image signals sent from the signal processing circuit 7 into digital signals with a predetermined number of bits and sends the converted signals to the CPU 1. The predetermined number of bits can be eight, for example.

The CPU 1 performs the following control operations according to a program which is set in the memory 2. The CPU 1 controls the motor driving circuit 4, the magnetic signal processing circuit 5, the line sensor driving circuit 6 and the light source driving circuit 9 to perform reading of the roll film 18. The CPU 1 also sets the accumulation time and the like for the line sensor 12 to accumulate electric charge according to information regarding scanning exposure conditions which is

> obtained from the host computer 19.
>
> Next, the CPU 1 detects positions of perforations in the roll film and decodes the contents of the bar codes, based on outputs from the medium position detection sensor 13 and the optical information reading sensor 14. The CPU 1 also takes in magnetic information and a film image which have been read and processed by the magnetic signal processing circuit 5, signal process circuit 7 and the A/D converter 8, and stores them in the memory 2. At this time, the CPU 1 stores the line data (i.e., image data) equivalent of one or several frames which are read into the memory 2 as information comprising three colors: R, G and B. Alternatively, the CPU 1 stores the line data equivalent of one or several frames which are read in the memory 2 as information corresponding to one of three colors: R, G and B.
>
> The CPU 1 obtains data concerning the display monitor from the host computer 19 through the IF circuit 3. The data can include, for example, screen size and display color numbers. The screen size is obtained in order to define a reading resolution given a relationship between the number of frames and the screen size. The CPU 1 also obtains scanning exposure conditions setting data, which are set by the user from the host computer 19 through IF circuit 3 and displayed on the display monitor. The memory 2 consists of a program memory and a working memory. Selection window data, index display setting window data and the like are also stored in the memory 2.
>
> The IF circuit 3 of the configuration of the first embodiment is a small computer system interface (SCSI). The IF circuit 3 outputs line data (i.e., image data) stored in the memory 2 to the host computer 19. The IF circuit 2 also sends frame designations and other commands as well as display monitor information from the host computer 19 to the CPU 1. [column7 line 25-column 8 line 64]

Appellants respectfully submit that nothing in these cited portions or elsewhere in *Ikeda* disclose or suggest at least the above emphasized claim features. Indeed, the above-emphasized portions would suggest otherwise (i.e., all photo-conversion units are used). Accordingly, Appellants respectfully request that the rejection be overturned.

Appellants wish to note as an aside that the claim language refers to "***an image sensor including a plurality of image capture elements***," and hence, contrary to what is alleged in the final Office Action (page 2), support in *Ikeda* cannot be found for the allegation in the final Office Action that the line sensor driving circuit shown in Figure 1 of *Ikeda* is an image capture element that is included within the sensor.

Because independent claim 16 is allowable over the art of record, dependent claims 18-22, 24, and 27 are allowable as a matter of law. Hence, Appellants respectfully request

that the rejection to claims 16 and 18-22, 24, and 27 be overturned.

For at least the forgoing reasons, it is Appellants' position that a *prima facie* for obviousness has not been made against Appellants' claims, and thus the rejections to claims 1, 3-7, 9-13, 15, 16, 18-22, 24, 26, and 27 should be overturned.

CONCLUSION

Based upon the foregoing discussion, Appellants respectfully request that the Examiner's FINAL rejection of claims 1, 3-7, 9-13, 15, 16, 18-22, 24, 26, and 27 be overturned by the Board, and that the application be allowed to issue as a patent with all pending claims 1, 3-7, 9-13, 15, 16, 18-22, 24, 26, and 27.

In addition to the claims shown in the claims Appendix VIII, Appendix IX attached hereto indicates that there is no evidence being attached and relied upon by this brief. Appendix X attached hereto indicates that there are no related proceedings.

Please charge Hewlett-Packard Company's deposit account 08-2025 in the amount of $510 for the filing of this Appeal Brief. No additional fees are believed to be due in connection with this Appeal Brief. If, however, any additional fees are deemed to be payable, you are hereby authorized to charge any such fees to deposit account No. 08-2025.

Respectfully submitted,

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VIII. CLAIMS - APPENDIX

1. An apparatus for capturing digital images, comprising:

an image sensor including a plurality of image capture elements, each of the image capture elements configured to capture image data;

an input element for communicating a print size to the apparatus;

responsive to entry of the print size, means for enabling fewer than all of the plurality of image capture elements to capture the image data; and

means for matching image capture elements corresponding to the fewer than all of the plurality of image capture elements with an aspect ratio corresponding to the print size.

3. The apparatus of claim 1, wherein a portion of the plurality of image capture elements is used to capture the image data and only the captured image data is presented to a user.

4. The apparatus of claim 1, wherein the print size aspect ratio corresponds to the aspect ratio of the image sensor.

5. The apparatus of claim 1, further comprising means for presenting an image capture template to a user of the apparatus.

6. The apparatus of claim 5, wherein the image capture template provides a visual reference to the plurality of image capture elements that correspond to the selected print size.

7. A method for adapting a print size to a captured image in a digital image capture device, the method comprising the steps of:

providing an image sensor including a plurality of image capture elements;

enabling fewer than all of the plurality of image capture elements to capture image sensor data;

matching the fewer than all of the plurality of image capture elements of the image sensor with an aspect ratio corresponding to a selected print size; and

presenting the captured image sensor data corresponding to the selected print size to a user of the image capture device.

9. The method of claim 7, further comprising the step of capturing image sensor data using only those image capture elements corresponding to the selected print size.

10. The method of claim 7, further comprising the step of printing the image sensor data corresponding to the selected print size.

11. The method of claim 7, further comprising the steps of:

presenting the image sensor data to a user of the image capture device; and

superimposing an image capture template over the image sensor data, the image capture template providing a visual reference on a display.

12. The method of claim 11, wherein the visual reference corresponds to the image sensor data.

13. The method of claim 11, wherein the image capture template is one of fixed and variable.

15. The method of claim 11, wherein a plurality of image capture templates are made available to a user of the image capture device.

16. A computer readable medium having a program for adapting a print size to a captured image in a digital image capture device, the program including logic for performing the steps of:

enabling fewer than all of a plurality of image capture elements of an image sensor to capture image data;

matching the fewer than all of the plurality of image capture elements of the image sensor with an aspect ratio corresponding to a selected print size; and

presenting the captured image sensor data corresponding to the selected print size to a user of the image capture device.

18. The program of claim 16, further comprising logic for performing the step of capturing image sensor data using only those image capture elements associated with the image sensor that correspond to the selected print size.

19. The program of claim 16, further comprising logic for performing the step of printing the image sensor data corresponding to the selected print size.

20. The program of claim 16, further comprising logic for performing the steps of:

presenting the image sensor data to a user of the image capture device; and

superimposing an image capture template over the image sensor data, the image capture template providing a visual reference on a display.

21. The program of claim 20, wherein the visual reference corresponds to the image sensor data.

22. The program of claim 20, wherein the image capture template is one of fixed and variable.

24. The program of claim 20, further comprising logic configured to present a user interface to enable entry of the print size by the user before image capture.

26. The method of claim 7, further comprising the step of presenting a user interface to enable entry of the print size by the user before image capture.

27. The program of claim 16, further comprising logic configured to present a user interface to enable entry of the print size by the user before image capture.

IX. EVIDENCE - APPENDIX

(None)

X. RELATED PROCEEDINGS - APPENDIX

(None)